

## **CLAIMS**



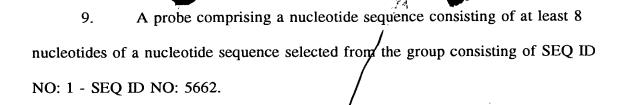
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1. An isolated nucleic acid comprising a nucleotide sequence encoding an E. cloacae polypeptide selected from the group consisting of SEQ ID NO: 5663 - SEQ ID NO: 11324.

- 2. A recombinant expression vector comprising the nucleic acid of claim 1 operably linked to a transcription regulatory element.
- 10 3. A cell comprising a recombinant expression vector of claim 2.
  - 4. A method for producing an *E. cloacae* polypeptide comprising culturing a cell of claim 3 under conditions that permit expression of the polypeptide.

5. An isolated nucleic acid comprising a nucleotide sequence encoding an E. cleacae polypeptide or a fragment thereof, said nucleic acid selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 5662.

- 6. A recombinant expression vector comprising the nucleic acid of claim 5 operably linked to a transcription regulatory element.
  - 7. A cell comprising a recombinant expression vector of claim 6.
- 8. A method for producing an *E. cloacae* polypeptide comprising culturing a cell of claim 7 under conditions that permit expression of the polypeptide.



10. An isolated nucleic acid comprising a nucleotide sequence of at least 8 nucleotides in length, wherein the sequence is hybridizable to a nucleic acid having a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 5662.

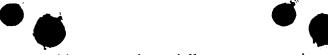
11. A vaccine composition for prevention or treatment of an *E. cloacae* infection comprising an effective amount of a nucleic acid of claim 5 and a pharmaceutically acceptable carrier.

- 12. A vaccine composition of claim 11, further comprising an adjuvant.
- 13. A vaccine composition of claim 11, further comprising one or more additional active ingredients.
- 14. A method of treating a subject for E. cloacae infection comprising
  20 administering to a subject a vaccine composition of claim 11, such that treatment of E. cloacae infection occurs.
  - 15. A method of claim 14, wherein the treatment is a prophylactic treatment.

16. A method of claim 14, wherein the treatment is a therapeutic treatment.

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- 17. A recombinant or substantially pure preparation of an *E. cloacae* polypeptide or a fragment thereof, wherein said polypeptide is selected from the group consisting of SEQ ID NO: 5663 SEQ ID NO: 11324.
- 18. A vaccine composition for prevention or treatment of an *E. cloacae* infection comprising an effective amount of an *E. cloacae* polypeptide of claim 17 and a pharmaceutically acceptable carrier.
  - 19. A vaccine composition of claim 18, further comprising an adjuvant.

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- 20. A vaccine composition of claim 18, further comprising one or more additional active ingredients.
- 21. A method of treating a subject for E. cloacae infection comprising
  15 administering to a subject a vaccine composition of claim 18, such that treatment of E. cloacae infection occurs.
  - 22. A method of claim 21, wherein the treatment is a prophylactic treatment.

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- 23. A method of claim 21, wherein the treatment is a therapeutic treatment.
- 24. A method for detecting the presence of a *Enterobacter* nucleic acid in a sample comprising:



- (a) contacting a sample with a nucleic acid of claim 5 under conditions in which a hybrid can form between the probe and a *Enterobacter* nucleic acid in the sample; and
- (b) detecting the hybrid formed in step (a), wherein detection of a hybrid indicates the presence of a *Enterobacter* nucleic acid in the sample.
  - 25. A computer readable medium having recorded thereon the nucleotide sequences depicted in SEQ ID NO: 1 SEQ ID NO: 5662 or fragments thereof.
- 10 26. A computer based system for identifying fragments of the *Enterobacter* genome of commercial importance comprising the following elements;
  - a) a data storage means comprising the nucleotide sequences SEQ ID NO: 1 SEQ ID NO: 5662 or fragments thereof,
- b) a search means for comparing a target sequence to the

  15 nucleotide sequences of the data storage means of step (a) to identify homologous sequences, and;
  - c) a retrieval means for obtaining said homologous sequences(s) of step (b).
- 27. A method of identifying commercially important nucleic acid fragments of the *Enterobacter* genome comprising the step of comparing a database comprising the nucleotide sequences SEQ ID NO: 1 SEQ ID NO: 5662 or fragments thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary nucleotide sequence to said target sequence, wherein said target sequence is not randomly selected.

